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Hiroaki Kishioka

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SUGHRUE-265550
2100 PENNSYLVANIA AVE. NW
WASHINGTON, DC 20037-3213

EXAMINER

DESAI, ANISH P

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/765,359	Applicant(s) KISHIOKA ET AL.	
	Examiner ANISH DESAI	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5 and 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's arguments received on 12/31/08 have been fully considered. The finality of the Final Office action mailed on 07/31/08 is withdrawn because the Examiner is introducing a new 35 USC Section 112-first and second paragraph rejections.
2. The 35 USC Section 103(a) rejections based on Okabe et al. (abstract of JP 07-105781) in view of Kishioka (US 2002/0098352A1) and Hitoshi (EP 0930322A2) are withdrawn after reviewing the prior art as a whole.
3. New 35 USC Section 112-first and second paragraph rejections are made.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a double-sided PSA tape comprising at least two PSA layers, wherein both PSA layers are ***compositionally different*** from each other, does not reasonably provide enablement for both PSA layers having ***same composition***.
5. Claim language requires that each adhesive layer has a specific peeling adhesive strength, which is different from one another. Further, the adhesive strength

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of the touch panel side PSA is measured to norbornene resin based film and the adhesive strength of the display device side PSA is measured to a glass plate or triacetal cellulose film. The Examiner submits that the difference in the adhesive strength as claimed can be achieved by **(A)** providing both PSA layers with **same adhesive composition** and since each adhesive layer is bonded to a **different** substrate (i.e. a PSA bonded to norbornene and a PSA bonded to glass or triacetal cellulose); the adhesive strength of each adhesive will be different or **(B)** both PSA layer have different adhesive strengths because **each is formed of a different composition**.

6. The Examiner submits that the scope of claim 1 encompasses aforementioned situations (A) and (B), whereas the specification is only enabled for (B). Therefore, the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

7. Case law holds that applicant's specification must be "commensurately enabling [regarding the scope of the claims]" *Ex Parte Kung*, 17 USPQ2d 1545, 1547 (Bd. Pat. App. Inter. 1990). Otherwise undue experimentation would be involved in determining how to practice and use applicant's invention. The test for undue experimentation as to whether or not all compounds within the scope of claim 1 can be used as claimed and whether claim 1 meets the test is stated in *Ex parte Forman*, 230 USPQ 546, 547 (Bd. Pat. App. Inter. 1986) and *In re Wands*, 8 USPQ2d 1400, 1404 (Fed.Cir. 1988). Upon applying this test to claims 1, 2, 5, and 6, it is believed that undue experimentation would be required because:

8. (a) The quantity of experimentation necessary is great since claim 1 reads on a double-sided PSA sheet containing at least two PSA layers, wherein each PSA layer has same adhesive composition, while the specification discloses that each PSA layer has different adhesive composition. For example, as shown in Example 1 of the specification, the PSA labeled as "A1" and the PSA labeled as "A2" are formed of different adhesive composition (see Preparation Example 1 having 92 parts of butyl acrylate vs. Preparation Example 2 having 98 parts of butyl acrylate).

9. (b) There is no direction or guidance presented for aforementioned situation (A).

10. (c) There is an absence of working examples concerning the aforementioned situation (A).

11. In light of the above factors, it is seen that undue experimentation would be necessary to make and use the invention of claims 1, 2, 5, and 6.

12. Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

13. Claim 1 recites "the double-sided pressure-sensitive adhesive has a thickness of not more than 50 μm ". The specification fails to provide support for "not more than 50 μm ". It is submitted that there is support in the specification to recite that the double-

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sided PSA has thickness of 10-50 or 20-50 micrometers on page 32 lines 5-9 of the specification but no support to recite "not more than 50 μm " which includes values less than 10 such as 0.5, 1, 2 etc. for which there is no support. Applicants pointed to page 51 lines 1-4 of the specification for support (see page 4 of 02/27/06 amendment).

However, this refers to two specific examples which have thickness of 40 microns and 50 microns and utilize specific acrylic polymer and does not provide support to broadly recite that the thickness is less than 50 microns.

14. Similarly, regarding claim 1 limitation "the major monomer for the respective pressure-sensitive adhesive layers is constituted from the same kind of monomer", it appears that specification fails to provide support for said limitation. While there are specific examples in the specification that utilize polymer made from the same monomer, i.e. butyl acrylate, this does not provide support to broadly recite that the major monomer for each layer is constituted from the same kind of monomer.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

15. Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

16. Claim 1 recites "and the major monomer for the respective pressure-sensitive adhesive layers is constituted from the **same kind** of monomer...". This recitation is

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ambiguous because it is not clear as to what is meant by “same kind of monomer”. By reciting “same kind of monomer” does Applicant want to convey that both PSA are formed of identical monomer (e.g. methyl (meth)acrylate) or does it mean that both PSA layer are formed of same type of monomer (e.g. alkyl (meth)acrylate)? For the purpose of the examination, “same kind of monomer” does not necessarily mean that both PSA are formed of identical monomer.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 1, 2, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kishioka (US 2002/0098352 A1) in view of Hitoshi et al. (EP 0930322A2).

18. Regarding claim 1 and 5 recitations “adhesive sheet to be used in sticking and fixing a touch panel to a display surface of a display device” and “The double-sided pressure-sensitive adhesive sheet...which is used for fixing a display device to a touch panel in the inner touch panel system” are interpreted as an intended use of the double-sided PSA sheet.

19. Kishioka discloses a pressure-sensitive adhesive composition and a pressure-sensitive adhesive sheet that is used to stick and fix an optical film on the display panel of a display device (abstract).

20. As to the claim limitation of "wherein the double-sided pressure-sensitive adhesive sheet has at least two pressure-sensitive adhesive layer but does not have a substrate", at paragraph 0065 Kishioka discloses "The pressure-sensitive adhesive layer can be constituted of a **plurality of layers** through another layer or **through no another layer**" (0065). This disclosure of Kishioka is interpreted to meet Applicant's aforementioned claim limitation.

21. As to the claim requirement of the total thickness of the double-sided PSA sheet of no more than 50 μm , it is noted that at paragraph 0064, Kishioka discloses thickness of the individual PSA layer in general ranges from 5 to 500 μm and from about 10 to 100 μm . Further, Kishioka states that the thickness of the PSA layer can be appropriately set as long as the handling properties are not deteriorated. While Kishioka does not explicitly teach the total thickness of the PSA sheet, it is submitted that based on the information given in Kishioka's disclosure with respect to the individual thickness of the PSA layer, selecting the total thickness of the PSA sheet so as to arrive at the Applicant's claimed thickness would have been obvious, motivated by the desire to provide suitable handling properties to the PSA sheet of Kishioka.

22. With respect to the claim recitation "wherein the respective pressure-sensitive adhesive layers each comprises an acrylic polymer containing...dodecyl (meth)-acrylate", the pressure sensitive adhesive of Kishioka is formed of **acrylic polymer**

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comprising monomer components of the aromatic ring-containing copolymerizable monomers, **the copolymerizable monomers containing no aromatic ring**, the monomer for modification etc. (0043). **As monomers containing no aromatic ring, Kishioka discloses monomers such as alkyl (meth)acrylates wherein the alkyl group has from one to 18 carbons. These monomers are methyl (meth)acrylate, ethyl(meth)acrylate etc. (see 0038-0039).**

23. With respect to the claim limitation “the major monomer for the respective pressure-sensitive adhesive layers is constituted from the same kind of monomer”, the Examiner submits that “same-kind of monomer” does not necessarily mean that both PSAs are formed of identical monomers. As set forth above, Kishioka's PSA sheet includes plurality of PSA layers (0065) and Kishioka further discloses same PSA composition as that of claimed by Applicant (0039). Therefore, it would have been obvious to form each PSA layer of Kishioka's adhesive sheet from same kind of monomers, motivated by the desire to simplify the process of forming the PSA sheet.

24. Kishioka is silent as to teaching “the proportion of the major monomer component constituting each pressure-sensitive adhesive layer is 80% by weight or more based on the whole amount of the monomer components”.

25. However, Hitoshi discloses a pressure-sensitive adhesive sheet based on acrylic adhesives that are useful as fixing tape, masking tapes, etc. for electronic parts (0002-0003). The adhesive tape of Hitoshi comprises from 70 to 100% by weight of a (meth)acrylic acid alkyl ester having on average 2 to 14 carbon atoms of the alkyl group based on the total amount of the monomers (0008). Additionally, the disclosure of

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Hitoshi at paragraph 0017 is interpreted as the presence of 85% to 95% by weight of (meth) acrylic acid alkyl ester monomer provides well balanced adhesive property and heat resistance. Further, the adhesive sheet of Hitoshi is excellent in transparency, foaming resistance, low out-gassing property, heat resistant and weather resistant (abstract).

26. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the proportion of the major monomer component in the amount of 80% by weight or more in the pressure-sensitive adhesive layer, motivated by the desire to form the pressure-sensitive adhesive tape having excellent adhesive property, heat resistance, foaming resistance, low gas-out property, discoloring resistance, and transparency.

27. As to the claim features "the double-sided pressure-sensitive adhesive sheet is capable of being adhered substantially entirely on the touch panel, and the other surface is capable of being adhered substantially entirely on the display surface of the display device", the double-sided PSA sheet having "optical isotropy", and "wherein the pressure-sensitive adhesive layer in the touch panel side has 180° peeling adhesive strength...so that the double-sided pressure-sensitive adhesive sheet is...touch panel", it is reasonable to presume that said features are necessarily present in the double-sided PSA sheet of Kishioka as modified by Hiroshi.

The support for said presumption is based on the fact that the double-sided PSA sheets of Applicant and that of Kishioka as modified by Hitoshi comprise at least two PSA layers wherein the PSA sheet has thickness of not more than 50 micrometers. Further,

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the double-sided PSA sheet of Kishioka as modified by Hitoshi comprise same acrylic polymer as set forth in claim 1.

28. Based on the aforementioned facts, the double-sided PSA sheet of Kishioka as modified by Hiroshi is structurally and compositionally equivalent to the double-sided PSA sheet of Applicant as claimed in claim 1. Therefore, the aforementioned properties would intrinsically be present in the double-sided PSA sheet of Kishioka as modified by Hiroshi. The burden is shifted to Applicant to prove it otherwise (*In re Fitzgerald*, 205 USPQ 594).

29. Regarding claim 2, it is respectfully submitted that Kishioka generally discloses that the PSA layer of his invention can be constituted of **plurality of layers** (0065). Thus, choosing the number of PSA layers (e.g. three to five) as claimed would have been obvious, motivated by the desire to form PSA sheet having suitable thickness with suitable handling properties.

30. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kishioka (US 2002/0098352 A1) in view of Hitoshi et al. (EP 0 930 322 A2) as applied to claims 1, 2, and 5 above, and further in view of Okabe et al. (JP 07-105781-abstract and English translation).

31. Regarding claim 6, Kishioka does not explicitly teach a touch-panel provided display device, wherein a display device and a touch panel are fixed to each other via the double-sided adhesive sheet.

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32. However, Okabe discloses a transparent touch panel structure wherein the transparent touch panel and the display panel is stuck to each other by an acrylic adhesive with good transparent property (see abstract).

33. It is noted that Kishioka generally discloses a sheet wherein the PSA composition has excellent adhesive performance (0082). Further the PSA sheet of Kishioka is used in the liquid crystal display area. Kishioka does not explicitly teach a touch panel-provided display device. However, the reference of Okabe discloses such a claimed display device, wherein the display device and the touch panel are fixed to each other by the double-sided adhesive sheet.

34. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the double-sided adhesive sheet of Kishioka as modified by Hiroshi and bond the touch panel and display device as taught by Okabe, motivated by the desire to form a touch panel-provided display device that has excellent adhesive performance.

Response to Arguments

35. Applicant's arguments received on 12/31/08 have been considered but they are not found persuasive.

36. With respect to the art rejections of Kishioka (US 2002/0098352) in view of Hitoshi (EP0930322), Applicant does not agree with the Examiner's position that the double-sided PSA sheet of Kishioka as modified by Hitoshi necessarily has the features of "wherein the pressure-sensitive adhesive layer in the touch panel side has a 180° peeling adhesive strength...and the pressure-sensitive adhesive layer in the display side has a 180°-peeling adhesive strength...of not more than 5.0N/20mm". In order to support his/her arguments, Applicant submits that the total thickness of the double-sided PSA sheet of the claimed invention is not more than 50 micrometers. According to Applicant, Kishioka discloses thousands of possible combinations of the thicknesses of the two PSA layers and there is no apparent reason to choose two or more PSA layers, each having a thickness within the very broad range taught by Kishioka, such that the total thickness would be within the claimed range of not more than 50 micrometers.

37. The Examiner respectfully disagrees for the following reasons:

38. It is noted that at paragraph 0064, Kishioka discloses thickness of the individual PSA layer in general ranges from 5 to 500 μm and from about 10 to 100 μm and therefore if two PSA layers are used, it is clear that the thickness would be 5-1,000 μm and 20-200 μm , which clearly overlaps the presently claimed thickness. As set forth in MPEP 2144.05, in the case where the claimed range "overlap or lie inside ranges

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disclosed by the prior art”, a prima facie case of obviousness exists, *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir.1990). Further, Kishioka states that the thickness of the PSA layer can be approximately set as long as the handling properties are not deteriorated. While Kishioka does not explicitly teach the total thickness of the PSA sheet, it is submitted that based on the information given in Kishioka’s disclosure with respect to the individual thickness of the PSA layer, selecting the total thickness of the PSA sheet so as to arrive at the Applicant’s claimed thickness would have been obvious, motivated by the desire to provide suitable handling properties to the PSA sheet of Kishioka.

39. Applicant argues that Hitoshi fails to teach or suggest the total thickness of the double-sided PSA sheet having at least two PSA layers. The Examiner submits that while Hitoshi do not disclose all the features of the present claimed invention, Hitoshi is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely the proportion of the major monomer component constituting each pressure-sensitive adhesive layer is 80% by weight or more based on the whole amount of the monomer components as presently claimed and in combination with the primary reference, discloses the presently claimed invention.

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40. Applicant argues that the total thickness of no more than 50 micrometers leads to excellent optical characteristics as can be seen from Examples 1 and 2 in Table 1 of the specification.

41. The Examiner respectfully disagrees for the following reasons:

42. From reviewing the specification, it appears that by reciting "optical characteristics", Applicant is referring to "The total luminous transmittance". The Examiner submits that the data is not persuasive because the data is not commensurate in scope with the scope of the present claims, given that the shown in Example 1 and 2 is narrower in comparison to what is claimed.

43. Further, in Example 1 thickness of the double-sided PSA sheet is 50 microns whereas the thickness in the comparative Example 1 is 52 microns, and there is a difference in optical characteristics. But this comparison is not persuasive given that this would not be side-by-side comparison between the inventive example and the comparative example given that the comparative example 1 utilizes a PET layer that is not found in Example 1. Additionally, while optical characteristics of Example 1 rate a circle and the optical characteristics of comparative example1 rate an "X", it is not clear that there is any significant different between the optical characteristics given that an "X" represents luminous transmittance of 5% or more which therefore includes 5% and circle represents luminous transmittance of less than 5% which therefore includes values of 4.8%, 4.9%, 4.9999% etc. Thus, there appear to be little, if any difference between the optical characteristics of these examples.

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44. Moreover, as set forth in MPEP 716.02(d), whether unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, "objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support". In other words, the showing of unexpected results must be reviewed to see if the results occurred over the entire claimed range. *In re Clemens*, 622 F.2d 1029, 1036, 206, USPQ 289,296 (CCPA 1980). Applicant has not provided data to show that the unexpected results do in fact occur over the entire claimed range of thickness.

45. Applicant argues that even if Kishioka and Hitoshi were combined, the resulting PSA tape would not be compositionally equivalent to the claimed invention. According to Applicant "Present claim 1 requires that the major monomer in the PSA layers is the **same monomer**." (page 4 of 12/31/08 amendment).

46. The Examiner respectfully submits that Applicant's arguments are not commensurate in scope with the presently claimed invention. Claim 1 does not require that each PSA layer be formed of **same** monomer; instead said claim requires "the major monomer for the...from the **same kind** of monomer". The Examiner submits that "same kind" does not mean "same". Accordingly, Applicant's arguments are not found persuasive and the art rejections are sustained.

Conclusion

47. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571)272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

48. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

49. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. D./
Examiner, Art Unit 1794

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1794